

COUNTRY : Bulgaria  
CATEGORY : Chemical Technology - Caoutchouc, Natural  
and Synthetic Rubber.  
ABD. JOUR. : RZKhim., No. 24 1959; No. 88593  
AUTHOR : Gerasimov, M.; Rushev, D.; Mikhaylov, M.  
INST. :  
TITLE : A New White Filler Obtained on Softening  
of water  
ORIG. PUB. : Leka prom-st, 1958, 7, No 4, 13-16  
ABSTRACT : It is proposed to use as a light-colored  
filler a material recovered from the sediment which is  
formed on softening of water at heat-and-power stations,  
soda manufacturing plants, etc. Its composition comprises  
essentially  $\text{CaCO}_3$  and  $3\text{MgCO}_3 \cdot \text{Mg}(\text{OH})_2 \cdot 3\text{H}_2\text{O}$ . By its techno-  
logical characteristics this filler is quite analogous to  
precipitated chalk, but its activity is 2 times greater  
than that of natural ground chalk. -- M. Al'bam.

CARD:

268

MUSKOVSKIY, S. M.

ALIZADE, U.D.; RUSAVSKIY, S.M.

Economic factors in hydraulic fracturing of oil sands. Azerb.  
neft.khoz. 36 no.3:44-47 Mr '57. (MLRA 10:5)  
(Oil wells) (Petroleum engineering)

RUSAVSKIY, S.M.

Indices of the utilization of drilling equipment. Azerb. нефт.  
khoz. 40 no.9:45-48 S '61. (MIRA 15:1)  
(Oil well drilling--Equipment and supplies)

RUSAYEV, D., polkovnik

In the heat of administration. Komm. Vooruzh. Sil 4 no.1:  
42-44 Ja '64. (MIRA 17:9)

ISMAILZADE, I.G.; RUSAYEV, M.R.; MAMEDOV, F.A.; GASANOVA, N.E.

Raman spectra of (mono) amylbenzene isomers. Azerb.khim.zhur.  
no.5:73-76 '60. (MIRA 14:8)

(Benzene—Spectra)

RUSCAK, M.

Incorporation of <sup>35</sup>S-methionine into proteins of the cerebral cortex in situ in rats during spreading EEG depression. Physiol. Bohemoslov. 13 no.1:16-20 '64.

1. Institute of Experimental Medicine SAV, Czechoslovak Academy of Sciences, Bratislava.

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RUSCAK, M.; ZACHAR, J.

"Metabolism of the brain during a spreading depression." p. 191.

CESKOSLOVENSKA FYSIOLOGIE. Praha, Czechoslovakia, Vol. 7, no. 3, May 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 1959.  
Uncl.

RUSCAK, M.

"Reactions of conditioned reflexes caused by a cardiazole cramp." p. 207.

CESKOSLOVENSKA FYSIOLOGIE. Praha, Czechoslovakia, Vol. 7, no. 3, May 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 1959.  
Uncl.

BUSCAK, M

"Relationship between potassium and lactic acid in blood following Adrenalin injection."

CESKOSLOVENSKA FYSIOLOGIE, Praha, Czechoslovakia, Vol. 7, no. 4, July 1958

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Sept 59  
Uncles

CZECHOSLOVAKIA

MACEJOVA, E.; RUSCAK, M.; Department of Normal and Pathological Physiology, Slovak Academy of Sciences (Ustav normalnej a patologickej fyziologie SAV), Bratislava.

"Effect of pH on Formation of Alanine and GABA in Subcellular Particles of the Central Nervous System of Rats."

Prague, Ceskoslovenska Fysiologie, Vol 14, No 5, Oct 1964; p 356-357.

Abstract: Continuation of study of alanine formation as an index of transaminase activity in mitochondria and 4 subfractions, membrane and supernatant (30,000 G). The enzymes differed from those in the liver by sensitivity to pH. The ubiquity of GABA makes it unlikely that the substance is a specific inhibitor in the rat central nervous system. Graph, 2 Western, 1 Czech reference. Paper presented at the 15th Physiology Days, Olomouc, 28 May 65.

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CZECHOSLOVAKIA/GREAT BRITAIN

MACEJOVA, E.; RUSCAK, M.; Department of Biochemistry, Oxford University, Institute of Normal and Pathological Physiology, Slovak Academy of Sciences (Ustav Normalnej a Patologickej Fyziologie SAV), Bratislava.

"Influence of Calcium and Onabain on Cerebral Cortex Metabolism in Vitro."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 2, Feb 66, pp 113-114

Abstract: In experiments with slices of rabbit brain conducted at 37°C, use of oxygen, accumulation of potassium, and glycolysis were investigated. Influence of Ca in nervous tissue is a function of the composition of the medium and of the polarity of the nerve cells. 1 Western reference. Submitted at "16 Days of Physiology" at Kosice, 30 Sep 65.

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RUSCAK, M.; KIRILCUK, V.

Kaliemia and blood pressure. Cesk. fysiolog. 8 no.5:430-431 S '59

1. Laboratorium neurofyzologie SAV a Fyziologicky ustav LFUK,  
Bratislava.

(POTASSIUM blood)

(BLOOD PRESSURE physiol.)

RUSCAK, M.

Conditioned reflex reactions in cardiazol convulsions. Cesk. fysiол. 7  
no.3:207-209 May 58.

1. Ustav experimentalnej mediciny SAV, Bratislava.

(PENTYLENETETRAZOLE, eff.

convulsions, eff. on conditioned reflex reactions (Cz))

(CONVULSIONS, exper.

pentylenetetrazole-induced, eff. on conditioned reflex re-  
actions (Cz))

(REFLEX, CONDITIONED,

eff. of pentylenetetrazole-induced exper. convulsions (Cz))

RUSCAK, M.

Effect of adrenaline on blood potassium and lactic acid. *Cesk. fysiол.*  
7 no.4:374 July 58.

1. Ústav experimentálnej medicíny SAV, Bratislava.  
(EPINEPHRINE, eff.  
on blood lactic acid & potassium (Cz))  
(POTASSIUM, in blood,  
eff. of epinephrine (Cz))  
(LACTIC ACID, in blood,  
same)

ZACHAR, J.; RUSCAK, M.

Cerebral metabolism in spreading depression. Cesk. fysiол. 7 no.3:191-192 May 58.

1. Oddelenie neurofyziological Ustavu experimentalnej mediciny SAV v Bratislave.

(CEREBRAL CORTEX, physiol.  
spreading depression, brain metab. (Cz))  
(BRAIN, metab.  
in cortical spreading depression (Cz))

DUDA, P.; RUSCAK, M.; ZACHAR, J.

Cerebral metabolism in depolarization induced by asphyxia following spreading depression. *Cesk. fysiolog.* 7 no.5:446-447 Sept 58.

1. Ustav experimentalnej mediciny SAV, Bratislava.

(BRAIN, metabolism,

eff. of depolarization induced by asphyxia after spreading decortical depression (Cz))

(ASPHYXIA, exper.

eff. of depolarization induced by asphyxia after spreading cortical depression on cerebral metab. (Cz))

(CEREBRAL CORTEX, physiol.

spreading depression with consecutive asphyxia & depolarization, eff. on cerebral metab. (Cz))

RUSCAK, M.

Effect of chlorides of alkaline metals on the level of lactic acid, alanine and  $\gamma$ -aminoburic acid in the rat brain. Biologia 17 no.2: 81-88 '62.

1. CHSAN - Institut eksperimental'noy meditsiny, Slovenskoy akademii nauk, Bratislava.

(BRAIN metab) (LACTATES metab) (ALANINE metab)  
(AMINO ACIDS metab)

RUSCAK, M.; MACEJOVA, E.

Some metabolic changes in ischaemic cerebral cortex of rats during EEG depression. *Physiol. Bohemoslov.* 12 no.6:570-576 '63.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

(CEREBRAL CORTEX) (PHYSIOLOGY)  
(ISCHEMIA) (ELECTROENCEPHALOGRAPHY)  
(CAROTID ARTERIES)

RUSCAK, M.

Increase of  $\gamma$  aminobutyric acid in the cerebral cortex during ischaemia and its relation to EEG depression; Physiol. Bohemoslov. 12 no.6:562-569 '63.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

(AMINOBTYRIC ACID) (CEREBRAL CORTEX)  
(PHYSIOLOGY) (ISCHEMIA) (ELECTROENCEPHALOGRAPHY)  
(CAROTID ARTERIES)

RUSCAK, M.; MACEJOVA, E.; RUSCAKOVA, D.

Effect of L-glutamic and  $\gamma$ -aminobutyric acid on glycolysis  
in slices and mitochondria of the rat central nervous system.  
Physiol. Bohemoslov. 13 no.2:156-160 '64

1. Institute of Experimental Medicine, Slovak Academy of  
Sciences, Bratislava.

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RUSCAK, M.; RUSCAKOVA, D.; MACEJOVA, E.

Adenosin triphosphatase in mitochondrial subfractions of the rat central nervous system and its activation by calcium, magnesium and manganese ions. *Physiol. Bohemoslov.* 14 no.3:261-265 '65.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

RUSCAK, M.; MACEJOVA, E.

Formation of L- $\alpha$  alanine and  $\gamma$ -aminobutyric acid in rat cortical slices in relation to the substrate and the pH in the medium. *Physiol. Bohemoslov.* 14 no.3:266-270 '65.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

RUSCAK, M.

Changes in the level of  $\gamma$ -aminobutyric acid (GABA) in the ischaemic brain of rats following application of some stimuli evoking spreading EEG depression. *Physiol. bohemoslov.* 11 no.3:192-198 '62.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

(AMINO ACIDS chemistry) (BRAIN chemistry)  
(ELECTROENCEPHALOGRAPHY) (ISCHEMIA experimental)

RUSCAK, M.

Raised brain and muscle alanine contents during increased glycolysis.  
Physiol. bohemoslov. 11 no.3:199-205 '62.

1. Institute of Experimental Medicine, Slovak Academy of Sciences,  
Bratislava.

(ALANINE chemistry) (BRAIN chemistry)  
(MUSCLES chemistry) (CARBOHYDRATES metabolism)

DUDA, P.; RUSCAK, M.; ZACHAR, J.

Spreading cortical depression and the polarization gradient of  
the cerebral cortex. *Physiol Bohemoslov* 10 no.5:438-447 '61.

1. Institute of Experimental Medicine, Slovak Academy of Sciences,  
Bratislava.

(CEREBRAL CORTEX physiol) (ANOXIA exper)

RUSCAK, Michal

On conditioned reactions to increased muscle metabolism. *Lek. prac.*  
[*Biol. lek.*] 1 no.3:1-108 '61.

1. Tschechoslowakische Akademie der Wissenschaften Institut der experi-  
mentellen Medizin, Abteilung der Neurophysiologie der Slowakischen  
Akademie der Wissenschaften.

(REFLEX CONDITIONED) (MUSCLES metab)

RUSCAK, Michal; KIRILCUK, Vladimir

The rise of plasma potassium is dependent upon the rise of blood pressure. *Biologia* 15 no.11:859-863 '60. (EEAI 10:5)

1. Ustav experimentalnej mediciny Slovenskej akademie vied Bratislava.(for Ruscak) 2. Fysiologicky ustav Lekarskej fakulty University Komenskeho, Bratislava.(for Kirilcuk)  
(POTASSIUM) (BLOOD PRESSURE)

RUSCAK, Michal

Brain metabolism during the EEG depression. Biologia 15 no.6:460  
'60. (EEAI 9:10)

1. Institut der experimentellen Medizin der Slowakischen Akademie  
der Wissenschaften, Bratislava.  
(BRAIN)

DUDA, P.; ZACHAR, J.; RUSCAK, M.

Course of terminal anoxic depolarization following spreading EEG depression.  
Cesk. fysiolog. 7 no.5:448-449 Sept 58.

1. Ustav experimentalnej mediciny SAV, Bratislava.  
(CEREBRAL CORTEX, physiol.  
spreading depression with terminal anoxic depolarization (Cz))  
(ANOXIA, exper.  
terminal anoxic depolarization after spreading cortical EEG  
depression (Cz))

RUSBAK, M

✓ Lactic acid level in electroshock and conditioned reflexes.  
A. Janik and M. Ruskák (Komenský Univ., Bratislava,  
Czech.). *Bratislav. Lekárska Listy* 36, Pt. 1, 80-7 (1966).  
MD Changes of the lactic acid level brought about in 28 psycho-  
paths and 6 exptl. animals (dogs) were analogous with  
changes produced by hard physical labor. The respective  
curves were evaluated and discussed. L. J. Urbánek...

(2)

RUSCAK, M.; RUSCAKOVA, D.; MACEJOVA, E.

Adenosinotriphosphatase in mitochondrial subfractions of the rat central nervous system and its activation by calcium, magnesium and manganese ions. *Physiol. Bohemoslov.* 14 no.3:261-265 '65.

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

RUŠČAKOVA, Dagmar

On the substructure of neuroglia. Biologia (Bratisl.) 20  
no.11: 809-817 ' 65.

1. Oddelenie experimentalnej cytologie Ustavu normalnej a patologickej fyziologie Slovenskej akademie vied v Bratislave.

RUSCAK, M.; MACEJOVA, E.; RUSCAKOVA, D.

Effect of L-glutamic and  $\gamma$ -aminobutyric acid on glycolysis  
in slices and mitochondria of the rat central nervous system.  
Physiol. Bohemoslov. 13 no.2:156-160 '64

1. Institute of Experimental Medicine, Slovak Academy of  
Sciences, Bratislava.

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RUSCAKOVA, D.

Effect of potassium ions on the morphological picture of cells of the cerebral cortex. *Physiol. Bohemoslov.* 13 no.2:161-166 '64.

Recovery processes in cells of the cerebral cortex after the application of potassium ions. *Ibid.*:167-171

1. Institute of Experimental Medicine, Slovak Academy of Sciences, Bratislava.

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L 33452-66

ACC NR: AP6023501

SOURCE CODE: CZ/0049/65/000/011/0809/0817

AUTHOR: Ruscakova, Dagmar--Rushchakova, D. (Doctor; Candidate of sciences; Bratislava)

ORG: Department of Experimental Cytology, Institute of Normal and Pathological Physiology, SAV, Bratislava (Oddelenie experimntalnej cytologie Ustavu normalnej a patologickej fyziologie Slovenskej akademie vied)

TITLE: Substructure of neuroglia *22*

*20  
B*

SOURCE: Biologia, no. 11, 1965, 809-817

TOPIC TAGS: cerebral cortex, rabbit, histology, cytology

ABSTRACT: The author studied the neuroglia substructure from the brain cortex of rabbit using glutaraldehyde perfusion fixation. Changes in the microglia structure caused by various fixation methods are discussed. Tubular structures of the cytoplasm were found in all the three types of neuroglia. The author thanks Doctor, Doctor of Medicine, Doctor of Natural Sciences H. Hager, head of the Department of Neurocytology, Max-Planck-Institute in Munich where the methodological part of the work, as well as the photographic documentation, were done during a research visit. Orig. art. has: 6 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 01Jun65 / ORIG REF: 001 / OTH REF: 023

Card 1/1 *dy*

*0915*

*1461*

RUSCAKOVA, Dagmar; BALON, Eugeniusz. K.

Congress of Polish Anatomists and Zoologists in Krakow on September  
21-25, 1959; a report. Biologia 15 no.4:300-302 '60. (EEAI 9:9)  
(POLAND--ANATOMY) (POLAND--ZOOLOGY)

CZECHOSLOVAKIA / Human and Animal Morphology (Normal and Pathological. Nervous System. S-4

Abs Jour: Ref Zhur-Biol., No 17, 1958, 79086.

Author : Mungyerova, Gertruda., Rusakova, Dagmar.

Inst : Not given.

Title : On the Problem of the Appearance Vacuole Forms of Oligodendroglia.

Orig Pub: Biologia, 1957, 12, No 2, 125-128.

Abstract: Describes the vacuole degeneration of the oligodendroglial cells in mice occurring under the influence of experimental edema, dehydration, poisoning by illuminating gas and carbolic acid. Changes of a regressive character are reversible. The possibility of autolytic changes and artifacts is excluded.

Card 1/1

RUSCAKOVA, Dagmar

3d Mid-European Histological Symposium in Smolenice. Biologia 16  
no. 3:229-230 '61. (EEAI 10:9/10)

(HISTOLOGY)

RUSCAKOVA, Dagmar

On the effect of monovalent chloride compounds on the nerve cells of the central gray matter of the cerebral cortex (Preliminary report). Biologia 16 no.12:925-929 '61.

1. Institut der experimentellen Medizin der Slowakischen Akademie der Wissenschaften, Abteilung für experimentelle Cytologie, Bratislava.  
(CHLORIDES pharmacol.) (CEREBRAL CORTEX pharmacol.)

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RUSCH, H. P.

Preparation of substances of the *o*-aminotoluene type and their derivatives substituted in the amino group. I. V. Ettel and J. Hebky. *Collection Czechoslov. Chem. Commun.* 13, 161-76(1948)(in English).—A no. of compds. of the *o*-aminotoluene type are modified by the addn. of salicylate, 3-hydroxy-2-naphthoate, or sulfanilamide groups, and tested for epithelization and bactericidal activities. *o*-Aminotoluene, 2',3'-dimethyl-4-aminotoluene (I), 2',3'-dimethyl-4'-sulfamyl-4-aminotoluene (II), and 3-methyl-4'-sulfamyl-4-aminotoluene (III) are used as intermediates. I is prepd. by diazotizing *o*-toluidine. 3,4-Me(AcNH)C<sub>6</sub>H<sub>3</sub>SO<sub>2</sub>NH<sub>2</sub> prepd. according to Child and Smiles (*C.A.* 21, 234) is hydrolyzed with 1:1 HCl by heating to 80° until dissolved, the soln. decolorized with C, and the compd. pptd. by addn. of base. After crystn. from H<sub>2</sub>O, 4-*amino-m-toluenesulfonamide* [3-methyl-4-aminobenzenesulfonamide] (IV), m. 160°, is obtained in 28% yield. To IV (37.3 g.) in 400 cc. H<sub>2</sub>O and 56 cc. concd. HCl is added with stirring at 7° 15.1 g. 92% NaNO<sub>2</sub> in 80 cc. H<sub>2</sub>O, then, after 15 min., 22.4 g. *o*-toluidine in 60 cc. H<sub>2</sub>O and 22 cc. concd. HCl, the temp. raised to 22°, 56 g. NaOAc added, and after 5 hrs. the ppt. filtered, washed, and crystd. from alc., giving II, m. 216° or 220°. To 172 g. sulfanilamide in 2 l. H<sub>2</sub>O and 280 cc. concd. HCl is added at 8° with stirring 74.5 g. 92% NaNO<sub>2</sub> in 400 cc. H<sub>2</sub>O, then, after testing with starch-I paper, 112 g. *o*-toluidine in 300 cc. H<sub>2</sub>O and 110 cc. concd. HCl, the temp. raised to 22°, 280 g. NaOAc added, and, after 4 hrs. stirring, the ppt. filtered, washed, and crystd. from alc. to give 87% III, m. 203°. Ac<sub>2</sub>O (102 g.) and 2 drops concd. H<sub>2</sub>SO<sub>4</sub> are added to 22.5 g. *o*-aminotoluene, the mixt. refluxed 4 hrs. and ground in a mortar until solid, decolorized with

C, and crystd. from MeOH, giving 26 g. (84% yield) 2,3'-dimethyl-4'-(diacetylamino)aminotoluene (V), m. 85°. To 11.3 g. I in 100 cc. dry C<sub>6</sub>H<sub>6</sub> is added 21.3 g. *o*-HO-C<sub>6</sub>H<sub>4</sub>COCl in 20 cc. C<sub>6</sub>H<sub>6</sub>, the mixt. heated 2 hrs. at 80-60°, the ppt. sepd., dissolved in cold 10% NaOH, acidified with HOAc, and crystd. from alc., giving 10.3 g. 2,3'-dimethyl-4'-salicyloylaminoaminotoluene, m. 203°. To I (7.5 g.) in 30 cc. dry Me<sub>2</sub>CO is added 20 g. fresh 3,3-HOC<sub>6</sub>H<sub>4</sub>COCl in 60 cc. Me<sub>2</sub>CO, the mixt. refluxed 1 hr., poured hot, with stirring, into 10% NaOH, filtered, 10% NaOH poured over the filter, and the combined filtrates made acid with HOAc, giving, after crystn. from alc., 7.5 g. 2,3'-dimethyl-4'-(3-hydroxy-2-naphthoylamino)aminotoluene, m. 245°. To pulverized I (14.7 g.) in 75 cc. anhyd. pyridine bases (b. 120-40°) at 40-60° is added over 20 min. 20.3 g. powd. *p*-MeCONHC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NH<sub>2</sub>, the mixt. boiled 10 hrs., the pyridine bases distd. off under reduced pressure, and the residue, after boiling with 45 cc. MeOH and 24 cc. concd. HCl 1 hr., filtered and ground with concd. NaOH soln., giving, after crystn. from alc.,

22 g. (90%) 2,3'-dimethyl-4'-sulfonylaminodiazobenzene, m. 180°. AcO (10 g.) and 152 g. II are heated 4 hrs. on a water bath, ground with H<sub>2</sub>O, filtered, and dried. From alc., giving 3.2 g. 2,3'-dimethyl-4'-azobenzene-4'-sulfonamide, m. 244°. II (13 g.) in 600 cc. MeCO and 13 g. o-HO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>COCl are allowed to stand 0.5 hr., then reduced 1 hr., filtered, and the residue dissolved in 10% NaOH, filtered, and made acid with HOAc, giving after filtration and crystn. from 80% alc. 11 g. (62%) 2,3'-dimethyl-4'-sulfonylaminodiazobenzene-4'-sulfonamide (VI), m. 233°. II (3.6 g.) in 75 cc. dry MeCO and 2.7 g. 3,3'-HO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>COCl in 15 cc. MeCO are reduced 4 hrs., and the ppt. filtered, ground with NaOH soln., washed, and dried from alc. to yield 3.5 g. (93%) 2,3'-dimethyl-4'-[3-(p-phenyl)-2-(methylamino)amino]-4'-sulfonylaminodiazobenzene-4'-sulfonamide (V). To 4 g. II in 15 cc. dry pyridine bases (0.120M) (4.40 g. added, with dry pyridine bases (0.120M) (1.40 g. added), the mixt. returned, 4 g. fresh p-MeCONH<sub>2</sub>CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, the mixt. heated at 100-105° 4 hrs., the pyridine bases dried off at reduced pressure, the residue reduced with 12 cc. MeOH and 6.6 cc. concd. HCl 1.5 hrs., the mixt. poured into 180 cc. H<sub>2</sub>O, filtered, and the solid treated with warm dil. Na<sub>2</sub>CO<sub>3</sub>, washed with H<sub>2</sub>O, and dried from 50% alc., giving 5.5 g. (92%) 2,3'-dimethyl-4'-sulfonylaminodiazobenzene-4'-sulfonamide, m. 317°. 3-Methyl-4'-oxalaminodiazobenzene-4'-sulfonamide, m. 278° (from 80% HOAc, yield quant.); 3-methyl-4'-(diacetylamino)-4'-sulfonylaminodiazobenzene-4'-sulfonamide, m. 238° (from 80% HOAc, 44% yield); 3-methyl-4'-[3-(p-phenyl)-2-(methylamino)amino]-4'-sulfonylaminodiazobenzene-4'-sulfonamide, m. 253-4° (87% yield); 3-methyl-4'-[3-(p-phenyl)-2-(methylamino)amino]-4'-sulfonylaminodiazobenzene-4'-sulfonamide, m. 253° (90% yield) are prepd. Similarly. The epilation from acetates of II, III, V, and VI are about equal, but the bactericidal activity is low. Character I: kison

Demethylation of carthagenic azobenzene dyes by autoxidizing linoleic acid. H. P. Ruesch and J. A. Miller (Univ. of Wisconsin, Madison). *Proc. Soc. Exptl. Biol. Med.* 68, 140-3(1949); cf. C.A. 42, 2348a. p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NMe<sub>2</sub> (I) and p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NHMe (II) increased the latent period of autoxidation of linoleic acid. The effect was proportional to the concn. within limits. I was a little more effective than II. p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NMe<sub>2</sub> and the m- and p-Me deriva. of I had approx. the same inhibiting power as I. p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NHMe was only slightly inhibitory and p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NHMe not at all. During the latent period, formation of gas (probably CO<sub>2</sub>) was observed when any of the methylated dyes were mixed with autoxidizing linoleic acid; gas formation was also observed with autoxidizing linoleic acid alone at the end of the oxidation period. As autoxidation of the dye-acid mixt. proceeded, demethylation of I and II occurred. After 30 hrs. 90% of the I initially added had disappeared and as much as 85% was accounted for as II. Thereafter the II decreased. Small amts. of p-Ph.N<sub>2</sub>:NCH<sub>2</sub>NHMe were detected. No demethylation occurred when the oxidation was inhibited by addn. of coppered

L. E. Gilson

B-2-7

R. T.  
 Improvement of vegetable oils by conjugated  
 hydrogenation. IV. Conjugated hydrogenation  
 of sunflower-seed oil with lower alcohols. V. A.  
 Ruzick and I. L. Dvitzhanova (J. Appl. Chem. Russ.,  
 1959, 42, 1999-1999; Zh. Khim., 1957, 308).—Sun-  
 flower-seed oil is partly hydrogenated by heating with  
 primary or sec. alcohols in presence of Ni catalyst  
 (15 min. at 200°), to yield an oil having the com-  
 position of olive oil. Aldehydes (CH<sub>3</sub>CHO, MeCHO,  
 etc.) or ketones (CO Me<sub>2</sub>) are obtained as by-products,  
 in yields of the mol. wt. of the alcohol. R. T.

ASM-SEA METALLURGICAL LITERATURE CLASSIFICATION

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MATERIALS INDEX

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PROCESS AND PROPERTIES INDEX

B-II-7

Improvement of vegetable oils by conjugated hydrogenation: V. A. RUSCH and I. L. DVIRIANI-KOVA (J. Appl. Chem. Russ., 1957, 10, 702-708).—Sunflower-seed oil and PROH are heated with Ni catalyst (200°/30 atm.; 20 min.), whereby linolenic acid is converted into oleic and lauric acids, and PROH into propylene and CO. The composition of the oil obtained approximates to that of olive oil.  
R. T.

METALLURGICAL LITERATURE CLASSIFICATION

FIRST AND SECOND LETTERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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101 AND 102 PAPERS      PROCESSES AND PROPERTIES MOQ1      102 AND 104 PAPERS

B-U-7

Analysis of wood-pulp residue and other wood  
 products. The residue from the pulping of  
 wood with  $\text{H}_2\text{SO}_4$  (10% solution) and  
 sodium bisulfite (10% solution) contained 7.44% of H<sub>2</sub>O  
 and (calc. on dry basis) 6.44 ash, 1.04 N, 1.44  
 carbohydrates 45.00% (comprising glucose 1.00,  
 sucrose 1.01, maltose 0.70, starch 0.0, hemicellulose  
 8.15, cellulose 25.20), and other at 0.2-0.2%.  
 The residue obtained by processing a waste like cedar  
 and had a yield of 1.00% (based on 100% H<sub>2</sub>O)  
 and had a yield of 1.00% (based on 100% H<sub>2</sub>O)  
 acid val. 1.00, mp. val. 1.00, (H<sub>2</sub>O-Walker)  
 184-9, OHS val. 94.9, nitrogen content val. 1.45,  
 potassium val. 0.40, unsaponifiable matter 1.05%.  
 The solid content consisted of solid acids 4.02, oleic  
 20.22, stearic 20.71, and lauric acid 5.40%. Films  
 of the resin on glass showed "crawling" and did  
 not dry in 2 weeks. After heating to 200°, it became  
 dust dry in 14 days. G. L. WILSON, K. L.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM STATION      FROM SOURCE

NO	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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RUSCHEV, D.; KONSTANTINOVA, V.

Differential thermal analysis of petrographic ingredients in  
the east Maritsa coal. *Gedishnik khim tekhn* 9 no. 1:143-152  
'62 [publ. '63].

GERASIMOV, M.; RUSCHEV, D.; RAIKOV, Kr.; BRANIakov, L.

Preparation of bitumen emulsions for road construction.  
Godishnik khim tekhn 8 no.1:183-203 '61 [publ. '62].

RUSCHEV, D.

Influence of the age and origin of brown coals on the physical and mechanical properties of mixed coke. Godishnik khim tekhn 9 no. 3:9-22 '62 [publ. '63]

RUSCHEV, D.; BUCHVAROV, Sv.; ALEKSIEV, E.

Thermographic studies of various Bulgarian coals and peats.  
Pt.1. Godishnik khim tekhn 8 no.1:1-8 '61 [pt.1. '62].

RUSCHEV, D.D.; MIKHAYLOV, St.S.

Semicooking of the constituent fractions of brown coals and peats.  
Zhur. prikl. khim. 38 no.4:925-930 Ap '65.

(MIRA 18:6)

1. Sofiyskiy khimiko-tehnologicheskii institut, Bolgariya.

BEKIAROVA, E.; ANGELOVA, V.; KOLEVA, D.; RUSCHEV, D.

Determination of gallium in certain Bulgarian coals and in the products of their industrial processing. Godishnik khim tekhn 8 no.1:153-158 '61 [publ. '62].

RUSCHEV, D., inzh.khim.

Radioactive gold and calcium. Tekh delo 13 no.429:3 2 Je  
'62.

RUSCHEV, D., inzh.

Why the lubricating oils spoil. Nauka i tekhn. mladezh no.1:28-29 Ja '57.

RUSCHEV, D.; VENKOVA, N.

Extraction of sulfonationites from certain varieties of Bulgarian coals and different varieties of bitumen coke. Godishnik khim tekhn 7 no.1/2:13-24 '60 [publ. '61].

GERASIMOV, Mikhail, prof. d-r inzh.; KAISHEV, Krum, dots.; RUSCHEV, Dimitur,  
dots. inzh.; SAVOV, Sava, inzh.

Adsorbents for mineral oils obtained by activation of the refuse  
and scoria from gas generators with fluidized bed. Tekhnika Bulg  
12 no.2:6-8 '63.

ROUSCHEV, D. [Ruschev, D.]; KONSTANTINOVA, V.

Differential thermic analysis of petrographic ingredients of East  
Maritsa coal. Doklady BAN 16 no.3:281-284 '63.

1. Submitted by Academician D. Ivanoff [Ivanov, D.].

RUSCHEV, D.; GOTSEV, N.

Investigation on the melting process of ashes from certain Bulgarian coal and possibility for its change. *Godishnik khim tekhn 5* no.2:13-25 '58 (Publ. '60).

BEKIAROVA, E.; RUSCHEV, D.

Determining the content of germanium in certain Bulgarian coals and in their manufactured products; 1st. report. Godishnik khim tekhn 5 no.2: 27-31 '58 (Publ. '60).

RUSCHEV, D.

Distr: 4E3d

Synthesis of antioxidation additives containing phosphorus. M. Gerasimov, D. Ruschhev, and A. Radoikov (Chem. Technol. Inst., Sofia, Bulgaria). *Izvest. Vysshikh Ucheb. Zavedenii, Neft i Gaz* 1959, No. 10, 133-5. The esters of  $H_3PO_4$  are widely used as antioxidn. additives in mineral oils. To study the effect of various substituents and their position in the benzene ring on the antioxidn. effect, a series of triphenylphosphite derivs. was synthesized and tested. The tests were made on transformer oil produced from Bulgarian crude oil. The highest antioxidn. effect was shown by the additives with the alkyl radical in the para position. The longer the chain of the alkyl radical, the higher is the antioxidn. effect. The additives synthesized from mixts. of phenols showed a higher antioxidn. effect than the individual additives. A. G. Steng

COUNTRY : BULGARIA  
CAT. NO. : Chemical Technology, Chemical Products and  
Their Applications. Chemical Processing of\*  
ART. JOUR. : REKHAM., No. 23 1959, No. 29584  
AUTHOR : Gerasimov, M.; Rushev, D.; Radoykov, A.  
TITL. :  
SUBJ. : Synthesis of Antioxidant Oil Additives in  
Bulgaria Derived from Indigenous Raw Materials  
ORIG. PUB. : Tezhka promishlenost, 1958, 7, No 9. 37-40  
ABSTRACT : Experimental investigations of the selection  
of raw materials for the synthesis of antio-  
xidant additives for lubricating oils, that  
could be manufactured from Tyulanevskaya  
crude oil in large quantities. For this pur-  
pose, the 175-200° and 200-230° fractions of  
gas generator tar, wood tar (beech), Dmitrov-  
skiy, Firinskiy and other semicoking tars,  
and also of Plachkovskiy coal tar were inves-  
tigated. Presented are data that characterize  
Natural Gases and Petroleum. Motor and Rocket  
Fuels. Lubricants.  
CARD: 1/2

GERASIMOV, M.; RUSCHEV, D.; RADOIKOV, A.

Synthesis of phosphorus-containing antioxidant additives.  
Izv. vys. ucheb. zav.; neft' i gaz 2 no.10:133-135 '59.  
(MIRA 13:2)

1. Khimiko-tekhnologicheskii institut, Sofiya.  
(Antioxidants) (Phosphorus)

RUSCHEV, D.; GEBASHEV, M.

"Concerning the utilization of sunflower oil in the linseed-oil and lacquer industry."

GOBISINIK: Vol. 3, No. 2, 1956; Sofia, Bulgaria

Monthly list of East European Accessions Index (EEAI), Library of Congress,  
Vol. 8, No. 8, August 1959

Unclassified

RUSCHEV, D.; SLAVOMIRAV, G.; GERASIMOV, M.

"Technology for obtaining coke with low-ash and low-sulfur content from neutralized petroleum and Tiulenov mazut."

TEZHKA PROMISLENOST, Sofia, Bulgaria, Vol. 8, no. 5, Mar. 1959

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59  
Unclas

RISCHEN, D.

"Producing electrotechnical carbon by method of coking petroleum from Tiulenovo."

p. 11. (Khimia i Industriia, Vol. 30, no. 1, 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAL) LC, Vol. 7, No. 12, Dec 58)

BULGARIA / Chemical Technology. Chemical Products H-23  
and Their Application. Chemical Process-  
ing of Natural Gases and Petroleum. Motor  
and Rocket Fuels. Lubricants.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2542.

Author : Rushev, D.

Inst : ~~Not given.~~

Title : The Preparation of Carbon Electrodes by the  
Carbonization of Tyulenovsky Petroleum.

Orig Pub: Khimiya i industriya (Belg.), 1958, 30, No 1,  
11-14.

Abstract: Results are given on the laboratory carboniza-  
tion of Tyulenovsky petroleum, as well as on  
the products of its fractional distillation —  
mazut and petroleum asphalt. The yields and  
characteristics of the products obtained are

Card 1/2

63

Ruschev, D.

BULGARIA/Chemical Technology - Chemical Products and Their  
Application. Fats and Oils. Waxes. Soap.  
Detergents. Flotation Reagents.

II-25

Abs Jour : Ref Zhur - Khimiya, No 6, 1950, 26668  
Author : Ruschev D.  
Inst : -  
Title : Catalytic Oxidation of Paraffin to Fatty Acids in the  
Presence of Manganese Catalysts.  
Orig Pub : Iaka promishlenost, 1956, 5, No 12, 9-10  
Abstract : Results of a study of the effect of  $KMnO_4$  on kinetics of  
paraffin oxidation.

Card 1/1

- 52 -

Ruschev, D.

BULGARIA/Chemical Technology - Chemical Products and Their  
Application. Lacquers. Paints. Lacquer and  
Paint Coatings,

H-30

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 27116

Author : Gerasimov M., Ruschev, D.

Inst : -

Title : Use of Sunflower Oil in the Manufacture of Drying Oil  
and Oil Varnish.

Orig Pub : Tezhka prom-st, 1957, 6, No 2, 24-27

Abstract : The highest I-values (135-136) are those of sunflower  
oil (SO) varieties from northern and mountain districts  
of Bulgaria. Drying time of SO having maximum I-values  
is from 20 to 24 days (oxygen values 10.3% and 10.1%,  
respectively), and that of mixtures with linseed oil  
varies from 10 days (with 10% SO in mixture) to 24 days  
(with 90% SO in mixture). Drying oil containing 20%  
SO produces coatings of good physico-mechanical

Card 1/2

COUNTRY : BULGARIA H  
CATEGORY : Chemical Technology. Chemical Products and  
Their Uses. Part 3. Processing of Natural\*  
ABS. JOUR. : RZKhim., No. 1 1960, No. 2522  
AUTHORS : Goraninov, H.; Ruschev, D.; Radoykov, A.  
TITLE : -  
TITLE : Synthesis of Anti-Oxidant Additives for  
Bulgarian Mineral Oils  
ORIG. PUB. : Tezhka promishlenost, 1958, 7, No 5, 14-16  
ABSTRACT : Data on the synthesis and the results of tests  
on the mineral oils of anti-oxidant P-con-  
taining additives of various structure are  
given. -- H. Rudenko  
  
\*Gases and Petroleum. Motor and Rocket Fuels.  
Lubricants  
  
APR: 1/1

RUSCHEV, D.; DIMITROVA, L.

Effect of volatile substances on the exchange capacity of sulfonation exchangers obtained from the semicoke of gas coals and bitumen coke. Zhur.prikl.khim. 35 no.11:2509-2512 N '62. (MIRA 15:12)

1. Khimiko-tehnologicheskii institut, Sofiya.  
(Coke) (Sulfonation) (Base-exchanging compounds)

SOV/68-59-5-4/25

AUTHOR: Rushev, D.D.

TITLE: Oxidation of Lean Weakly Caking Coals (Okisleniye toshchikh slabospekayushchikhsya ugley)

PERIODICAL: Koks i khimiya, 1959, Nr 5, pp 11-12 (USSR)

ABSTRACT: In order to investigate the influence of phenolic groups on oxidation and caking ability of coals, experimental determination of the plastic properties of blends from lean weakly caking coals (Table 1) and tars containing various proportions of phenolic and oxygen containing groups (Table 2) was carried out. The procedure consisted of the preparation of coal samples crushed to pass - 1.5 mm mesh screens containing 5, 10 and 15% of brown coal or wood tar. (Tar was introduced in benzene solutions with subsequent evaporation of benzene). The plastic properties were measured in the Sapozhnikov apparatus. It was found that an insignificant oxidation of weakly caking coals is sufficient to improve their caking properties (concluded on the basis of an increase in the thickness of the plastic layer), while a higher degree of oxidation leads to a complete loss of the

Card 1/2

30V/68-59-5-4/25

Oxidation of Lean Weakly Caking Coals

above properties (Table 3).

There are 3 tables, 9 references, of which 7 are Soviet  
and 2 English.

Card 2/2

ASSOCIATION: Narodnaya Respublika Bolgariya (Bulgarian People's  
Republic)

ANGELOVA, Gergina, st. n. sutrudnik, k. kh. n.; SERTOVA, Zapriana, inzh.;  
RUSCHEV, Dimitur, dots, k.t.n.; MINEVA, Svetla, inzh.

Determination of uranium content in various solid fuels,  
and the character of its connection with coal. Tekhnika  
Bulg 13 no.8:19-21, 29 '64.

1. Institute of Organic Chemistry, Bulgarian Academy of  
Sciences (for Angelova and Sertova). 2. Institute of  
Industrial Chemistry (for Rushev and Mineva).

GERASIMOV, Mikhail prof., inzh.; KAISHEV, Krum, dots., kandidat tekhnicheski nauki; RUSCHEV, Dimitur, inzh.; GRUEVA, Todorka, inzh.

Obtaining absorbers through activating certain scoria and carried way elements from the Bulgarian coal. Tekhnika 10 no.9:12-15 '61.

(Coal) (Gases --Absorption and adsorption)

RUSCHEV, D.

"Coking coke tar and coal resin."

p. 31 (Tezhka Promishlenost, Vol. 7, no. 2, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 7,  
September 1958

SOV/68-59-5-4/25

AUTHOR: Ruschev, D.D.

TITLE: Oxidation of Lean Weakly Caking Coals (Okisleniye toshchikh slabospekayushchikhsya ugley)

PERIODICAL: Koks i khimiya, 1959, Nr 5, pp 11-12 (USSR)

ABSTRACT: In order to investigate the influence of phenolic groups on oxidation and caking ability of coals, experimental determination of the plastic properties of blends from lean weakly caking coals (Table 1) and tars containing various proportions of phenolic and oxygen containing groups (Table 2) was carried out. The procedure consisted of the preparation of coal samples crushed to pass - 1.5 mm mesh screens containing 5, 10 and 15% of brown coal or wood tar. (Tar was introduced in benzene solutions with subsequent evaporation of benzene). The plastic properties were measured in the Sapozhnikov apparatus. It was found that an insignificant oxidation of weakly caking coals is sufficient to improve their caking properties (concluded on the basis of an increase in the thickness of the plastic layer), while a higher degree of oxidation leads to a complete loss of the

Card 1/2

SOV/68-59-5-4/25

Oxidation of Lean Weakly Caking Coals

above properties (Table 3).

There are 3 tables, 9 references, of which 7 are Soviet  
and 2 English,

Card 2/2

ASSOCIATION: Narodnaya Respublika Bolgariya (Bulgarian People's  
Republic)

RUSCHEV, D. D.

СВЯТАЯ ПРАВОСЛАВНАЯ ЦЕРКОВЬ. ИСТОРИКО-НАУЧНОЕ ИЗДАНИЕ.

Н. ДОИДЖИ О. ДИНАМИКА ТЕПЛОТ  
А. А. Пресс

VIII Mandelstam Congress for General and Applied Chemistry in  
Section of Chemistry and Chemical Technology of Fuels,  
Publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports scheduled to be presented at above mentioned congress,  
Moscow, 13 March 1979.

© 1979 by USSR

KIRKOV, K., khim.; RUSCHEV, T., khim.; VULKOVA, N., inzh.

Transparent coloring of nitrocellulose varnishes in  
furniture industry. Durvomebel prom 6 no. 2:10-13  
Mr-Ap '63.

RUSCHEVA, M.

Surname (in caps); Given Names

Country: Bulgaria

Academic Degrees:

Affiliation: Senior Laboratory Worker at the Clinical Laboratory of  
The 2nd United City Hospital (II Gr. Ob. Bolnitsa), Sofia

Source: Sofia, Sreden Meditsinski Rabotnik, No 2, 1961, pp 36-39

Data: "The Organization of Work in the Polyclinical Section of  
the Clinical Laboratory of the 2nd United City Hospital in  
Sofia."

RUSC

COUNTRY : Rumania R-25  
 CATEGORY :  
 ABS. JOUR. : RZKhim., No. 1959, No. 72720  
 AUTHOR : Mikhul, K.; Ruschor, K.; Pop, V.;  
 INST. : University of Iasi  
 TITLE : Fluorescent Fractions of Diesel Fuel from  
 Rumanian Petroleum.  
 ORIG. PUB. : An. stiint. Univ. Iasi, Sec.1, 1957, No 1-2,  
 243-256  
 ABSTRACT : Study of fluorescence spectra of Rumanian  
 petroleum fractions boiling in the range of 240-350°.   
 Excitation was effected with total light of mercury lamp.  
 Spectra were photographed using quartz spectrograph.  
 Photographs were made of spectra of the fractions, as well  
 as of their solutions in ether, at concentrations from 10  
 to 0.001%. Spectra of fractions and of their solutions are  
 in the 300-550 m $\mu$  region. The conclusion is reached that  
 luminescence is caused by presence of naphthalene, pte-  
 nanthrene, anthracene, and their homologues.  
 V. Yermolayev.  
 CARD: 1/1 Shvarts, R.; Redulesku, A.

NIKOLAYEV, A., professor; RUSCHUKLIYEV, I., starshiy prepodavatel'  
(Bolgariya)

Changes in the motor apparatus of a tennis player. Vest. rent. 1  
rad. 31 no. 6:42-46 N-D '56. (MLRA 10:2)

(ARM

bone changes in tennis players)

(ATHLETICS, physiol.

bone changes in arm of tennis players)

RUSCIOR, C.

Distr: 4E3d

Fluorescence spectra of illuminating oils. C. Mihul, C. Ruscior, and V. Pop. *Analele stint. univ. "Al. I. Cuza Iași" (N.S.)*, Sect. 1, 2, 199-209 (1958) (French summary).—The spectra of 4 samples of illuminating oils, 2 of the paraffinic and 2 of the asphaltic type, extended from 3200 to 4800 Å. Upon dissolving the oils in Et<sub>2</sub>O the spectra shifted towards shorter wave lengths and underwent the following modifications: (a) below 3200 Å. the fluorescence 1st appeared, then disappeared with increasing diln.; (b) between 3200 and 3700 Å. it persisted to dilns. of 0.01 and even 0.001%, and (c) above 3700 Å. it faded rapidly at dilns. between 10 and 1%. The fluorescence in the 3 spectral re-

gions was caused, resp., by benzene, naphthalene, and anthracene. The decrease in the fluorescence intensity of the oils at about 3200 Å. was explained by the presence of compds. such as naphthalene which absorb radiation at the shorter wave lengths. When the oils were dild., the concn. and extinction power of naphthalene were lowered; this exposed the spectrum below 3200 Å. Only the spectral region of naphthalene is characteristic of the illuminating oils and identification of products of diverse origin should be made with dil. solns. in this region. The range from 3215 to 3245 Å. is best since it avoids interference by polycyclic compds. such as anthracene, as well as the strong absorption below 3200 Å. due to naphthalene. S. A. Stern

RUMANIA/Chemical Technology. Chemical Products and Their Applications. Chemical Processing of Natural Gases and Petroleum. Motor and Rocket Fuel. Lubricants. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 20874

Author : Mihul, C., Ruscior, C., Pop, V.

Inst : Iasi University.

Title : The Spectra of Fluorescein Kerosenes.

Ori Pub : An. stiint. Univ. Iasi., 1956, Sec. 1,2, No 1-2, 199-210

Abstract : During the investigation of microphotograms taken in a Gilger E 31 spectrograph of 4 kerosenes (K) in the area of lambda greater than 3700 A, the development of fluorescein as well as the presence of

Card : 1/3

MIHUL, C.; RUSCIOR, C.; SUCIU, M.; MOLDOVANU, Al.

Determination of the aromatic compounds in light gasoline  
by the Raman spectral analysis. Studii fiz tehn Iasi 14 no.  
2:369-373 '63.

RUSCIOR, C.; SUCIU, M.; VASILUTA, L.

Molecular spectral analysis by the combined diffusion of light.  
Studii fiz tehn Iasi 14 no.1:163-168 '63.

RUSCIOR, C

Distr: 4E2c

18

✓ Electroerosion of several metals. N. Calinicenco, C. Ruscior, and Cornelia Clobanu. *Bul. Inst. Politeh. Jasi* (N.S.), 3, 55-60 (1957); *cf. C.A.* 51, 11840h. — The erosion of 2 electrodes of Fe, Ni, Cu, Al, and Mg, caused by a spark discharge in air and in paraffin oil, was studied as a function of c.d. and of the capacity of a condenser mounted in parallel with the electrodes. The cathodic and anodic erosion per unit elec. energy decreased with increasing c.d. and was larger in oil than in air. The erosion increased with shunting capacity and was also larger in oil than in air; however, the rate of increase in oil became small at higher capacities. The total erosion per spark increased linearly with current for almost all the metals investigated; in air it was more pronounced for the more oxidizable metals, while the reverse was true in oil. An increase in the shunting capacity raised the total erosion per spark both in air and in oil. This increase was linear in most of the cases studied, and most pronounced in oil for the less oxidizable metals. The observed phenomena could not be readily interpreted, but are believed to be due to thermal processes.

S. A. Stern

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RUSCIOR, C.

The fluorescence of Romanian diesel oils. C. Mihul, C. Ruscior, V. Pop, P. R. Schwartz, and G. A. Rădulescu. *Analele Univ. "Al. I. Cuza" Iasi, Sect. I, 3, 243-56 (1957)* (in Russian).—The fluorescence spectra of 4 types of diesel oils were studied. The spectra of 3 types showed a series of relative max. situated at 540, 436, 414, 394, 372, and 358 m $\mu$ , as well as 2 regions of rapid decrease in intensity at about 385 and 350 m $\mu$ . The spectrum of the 4th type of oil differed from the previous ones in that the max. at 394 m $\mu$  was missing, while the max. at 436, 414, and 358 m $\mu$  were displaced by about 2-3 m $\mu$  towards longer wavelengths. An examn. of the spectra of solns. of the oils in Et<sub>2</sub>O at concns. from 0.001 to 10%, and of fractions obtained by distn., led to the conclusion that the fluorescence of the diesel oils is due to the presence of naphthalene, anthracene, phenanthrene, and of their homologs.

S. Alexander Stern

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RUSCIOR, C.

Distr: 4E2c

A study of erosion by discharges between different metallic electrodes. N. Caliniceco, C. Ruscior, and Cornelia Ciobanu. *Bul. Inst. Politeh. Iasi* (B), 4 119-20 (1988); cf. CA 53, 8818b. The anodic erosion of  $Md/W$ ,  $Fe$ ,  $Ni$ ,  $Cu$ ,  $Al$ ,  $Mg$ ,  $Pt$ , and  $Zn$  was detd. by discharge in paraffin oil, at a  $Cu$  cathode which presents a small cathodic erosion. The electrodes were mounted in parallel with a  $180 \mu f$ . condenser supplied with 120 v. d.c., and the discharge was automatically controlled. The variations in the applied potential and in the intensity of discharge, as well as the duration of the discharge were followed with a cathode oscillograph. A proportionality was found between the amount of eroded metal in a given time in a dielec. and the applied energy. The erosion per energy unit increased in the order given above and was const. for a given metal. The relation  $A(m/W)^{1.7} = 84 \times 10^3$  was established between the m.p. of the metal ( $\theta$ ), the temp. of fusion ( $L$ ),

and the erosion per energy unit ( $m/W$ ), where  $A = \theta L$ . A min. temp. for the erosion process was calcd., based on the Maxwellian potential of the magnetic field created by the discharge current. A correlation was found between the anodic erosion and the dielec. const. of the medium; the anodic erosion increased with increasing cond. of the medium. Discharge in liquids increased the erosion and was characterized by isolation of the discharge channel with respect to the oxidative action of the medium, increased localization of the discharge on the electrodes, and prevention of formation of oxides. Robert A. Sanford

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24(7)

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TITLE:

Fluorescence Spectra of Motor Fuels (Spektry fluorestsentsii motorinov)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,  
Vol 23, Nr 1, pp 122 - 125 (USSR)

ABSTRACT:

This paper describes the results obtained by an investigation carried out by the authors (Romania) of the fluorescence of motor fuels extracted from Romanian mineral oil. Four substances A<sub>1</sub> special, A<sub>1</sub>, A<sub>3</sub>, and C were investigated, the properties of which are given by a table. The spectra (Fig) of the first three samples differ only little from one another. The  $\lambda$  - values of the maxima are given. With sample C matters are somewhat different. The most important maxima are shifted into the long wave range. Also the microphotographs of solutions of the four samples in ethyl ether of various concentrations are given by a figure. For the purpose of determining the substances contained in the motor fuels, comparative pictures were made of the absorption spectra of naphthalene,

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Fluorescence Spectra of Motor Fuels

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phenanthrene and anthracene (Fig 3). The results obtained by these investigations show that the formation of motor oil spectra is mostly due to naphthalene, anthracene, and phenanthrene or to other similar luminescent compounds. In the presence of many luminescent compounds the comparative investigation method is not very well suited. Therefore, the luminescence spectra of a fraction of the motor fuel C were, in addition, investigated according to 10 percent of volume. The first four fractions differ only little from one another and correspond to the naphthalene-, phenanthrene- and anthracene spectra. In the case of others, intensities are shifted to a considerable extent into the long-wave range. Individual maxima and their variation are mentioned individually. On the basis of the fluorescence spectra of the fractions, the authors arrive at the conclusion that the motor fuels naphthalene, phenanthrene and anthracene investigated by them contain quantities which decrease in this order. There are 4 figures, 1 table, and 7 references, 4 of which are Soviet.

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~~Chromatographic semi-microanalysis of gases. IX. Determination of nitrous oxide. Jaroslav Janak and Miroslav Rusek (Ústav pro naltový výzkum, Brno, Czech.). Chem. Listy 48, 397-400 (1954); cf. C.A. 48, 8321f.~~ Characteristic elution vols. (adsorption spectra) of  $N_2O$  were measured on activated C and silica gel at 20° and 80°, resp.  $R_f$  on C was 0.0284 at 20° and 0.234 at 80°.  $R_f$  on  $SiO_2$  was 0.0528 at 20° and 0.297 at 80°. Practical results were obtained in detg.  $N_2O$  in the presence of N, H,  $CH_4$ , and  $C_2H_6$ . The method is suitable for the analysis of com.  $N_2O$  and for the analysis of gases from the earth in prospecting for petroleum. M. Hudlický

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CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their H.  
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